CLAIMS:

1. A lithographic projection apparatus comprising:

a radiation system to supply a projection beam of radiation;

a support structure to support patterning structure, the patterning structure serving to pattern the projection beam according to a desired pattern;

a substrate table to hold a substrate; and

a projection system to project the patterned beam onto a target portion of the substrate,

wherein at least one space selected from the group comprising a space containing at least a part of said radiation system, and a space containing at least a part of said projection system contains an inert gas at a pressure of about 0.1 to 10 Pa.

2. An apparatus according to claim 1, wherein said radiation system is adapted to produce a projection beam of extreme ultraviolet radiation having a wavelength of less than 50nm.

3. An apparatus according to claim 2, wherein said beam of extreme ultraviolet radiation has a wavelength in the range of from 8 to 20 nm.

4. An apparatus according to claim 3, wherein said beam of extreme ultraviolet radiation has a wavelength in the range of from 9 to 16 nm.

5. An apparatus according to claim 1, wherein said inert gas is helium, argon or nitrogen, or a mixture thereof.

6. An apparatus according to claim 1, wherein the pressure in said at least one space is from 1 to 5 Pa.

7. An apparatus according to claim 6, wherein the pressure in said at least one space is from 2 to 3 Pa.

8. A method of manufacturing a device using a lithographic projection apparatus comprising:

projecting a patterned beam of radiation onto a target portion of a layer of radiation-sensitive material on a substrate; and

supplying an inert gas to at least one space selected from the group comprising a space containing at least a part of said radiation system and a space containing at least a part of said projection system, wherein the pressure in said at least one space is from 0.1 to 10 Pa.

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9. A device manufactured in accordance with the method of claim 8.

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